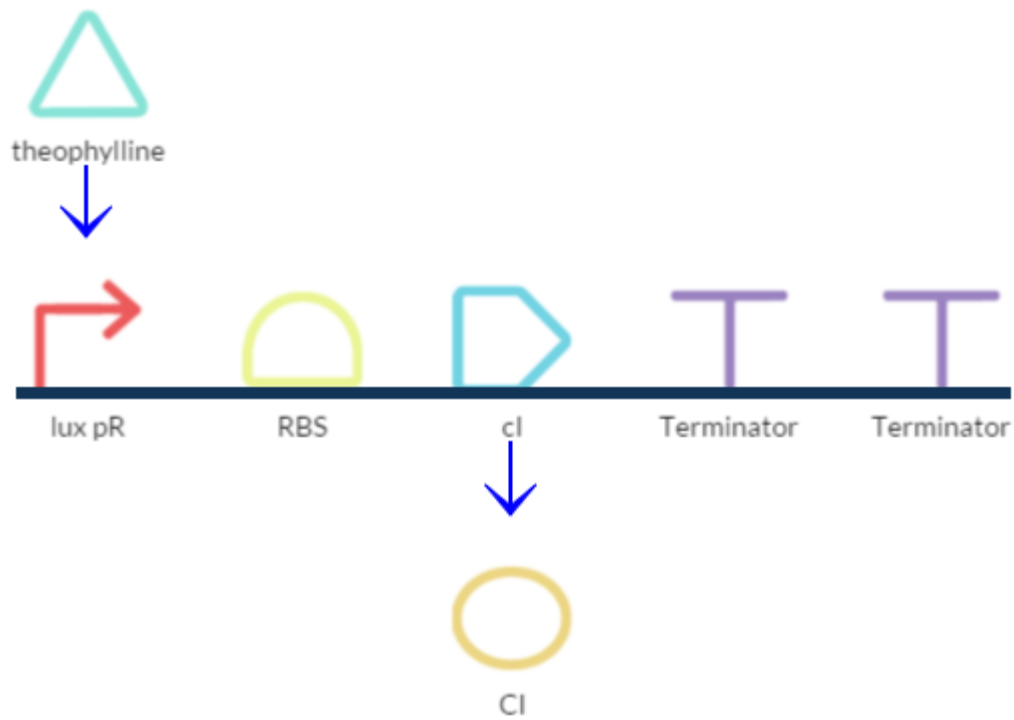


## Regulation



### Formulae for two certain parts

Set Theophylline1 = 1mM

CI and cI

$$\frac{d[CI]}{dt} = k_1 k_2 \chi_{luxpR1} [cI^F] - \gamma_1 [CI]$$

$$[cI^F] = [cI] \frac{1}{1 + \left( \frac{[Theophylline]}{K_1} \right)^{n_1}}$$

### Parameter Table

k_1	Max transcription rate of regulatory CI mRNA	0.0933 nM/s
k_2	translation rate of CI protein	0.0072 /s
K_1	Kd of Plux promoter	1.6 nM
n_1	Hill co-efficiency of Plux promoter	1.6
gamma_1	Degradation rate of regulatory CI protein	0.000935 /s

**Reference:** <http://2011.igem.org/Team:USTC-China>